

Dan Jones Survey Analysis

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INTRODUCTION

Dan Jones & Associates, a full-service public opinion and market research firm located in Salt Lake City, Utah, was commissioned by HDR Incorporated to conduct and compile an opinion survey of SR-201 users.

RESEARCH OBJECTIVES

- Discover how often, in an average month, respondents travel on the 2100 South Freeway (SR-201)
- Identify the general purpose of trips on SR-201, location of respondent's work, and times of day the road is traveled
- Ascertain ratings of safety, traffic flow, interchanges, and overall conditions of the road
- Assess how safe respondents' feel the road is, and identify safety concerns and possible safety improvements.
- Determine where users generally enter and exit SR-201 and which interchanges are used regularly
- Measure interchange wait times and traffic flow
- Identify where respondents would like improvements to begin and the amount of disruption and length of time they prefer
- Assess whether I-215 should be restriped to four lanes or changed back to a three-lane freeway.

PROCEDURES

Dan Jones & Associates developed the questionnaire, with direction from representatives of HDR as well as representatives of the Utah Department of Transportation. To meet the research objectives, 300 Utah SR-201 users were interviewed by telephone in October of 2002, between the hours of 4:00 and 9:00 p.m. on weekdays and between 9:00 a.m. and 3:00 p.m. on Saturdays.

The client approved the questionnaire prior to implementation. Before any fieldwork began, the survey instrument was thoroughly pretested on individuals selected at random from the sample universe. The purpose of the pretest was to detect any

discrepancies that might have existed in the instrument in terms of completeness, level of shared language, and appropriateness of the questions. The client also approved any changes made to the questionnaire as a result of the pretest.

SAMPLE

For the purpose of this research, Dan Jones & Associates utilized a random systematic sampling procedure, giving each residence within the sample universe an equal opportunity of being selected for an interview. The sample universe consisted of Salt Lake County and Tooele County. All respondents were screened to include those who use SR-201 once a month or more.

The margin of error for this survey is $\pm 6.5\%$ for total data. For the responses of subgroups within the data, the margin of error increases.

FIELD WORK

Dan Jones & Associates employs professional, experienced interviewers who have worked on numerous surveys to date and proven to be reliable, thorough, and able to develop excellent rapport with respondents. Interviewers were cautioned to limit interaction with respondents concerning the individual responses to the questionnaire. Interviewers were thoroughly briefed by the project director to assure congruity in reciting the questions and recording the responses.

Both structured and unstructured questions were used to measure intensity of opinions and to assess the perceptions of respondents. Demographic questions were asked to provide opinions of subgroups.

DATA ANALYSIS

The staff of Dan Jones & Associates prepared statistical results. Each question has a response distribution, as well as a series of cross-tabulations or contingency tables, which organizes responses by various demographic groupings and allows for detection of differences that may exist between the opinions of subgroups.

Dan Jones & Associates analyzed the data using SPSS, Statistical Package for Social Science. Several statistical tests were conducted to help determine if the

differences in the relationships found between two populations are real or merely due to chance. Please note that sample cell sizes of less than 30 persons lower the reliability of the data.

Survey results are in the Detailed Analysis section, followed by appendices of the questionnaire with results, respondent verbatim comments, and demographic tables.

EXECUTIVE SUMMARY

USE OF SR-201

Nearly two out of five respondents say they use SR-201 one to three times a month. One-fifth travel it one to two times a week, and 40% indicate they use the freeway frequently (3-5 times a week or almost daily).

Two in five users indicate they are currently using the 2100 South Freeway about the same amount as they did one year ago. Just over one-fifth say they use SR-201 either somewhat or much less now than in the previous year.

More than half of users indicate they travel the 2100 South Freeway most often for personal reasons like shopping, or medical appointments, etc. Work related travel and to get to or from work are other reasons respondents most often use this freeway.

Of those using the 2100 South Freeway to get to and from work, the largest percent say they work in Salt Lake City. West Valley is the next most frequently mentioned work location. Several other cities throughout Salt Lake County were mentioned less frequently and a small number indicated their work was located in Tooele County.

Though the percent is small, the most frequent time for daily users is during the traditional "rush" hours with just over one in ten saying they travel between 6:30 to 8:30 and 4:00 pm to 7:00 pm. A majority of respondents never use the 2100 South Freeway on weekdays in the morning hours and after 7:00 pm. Around a third of respondents say they never use the freeway during the daytime hours.

SR-201 RATINGS

Users give SR-201 just slightly above average ratings on several items with overall road conditions receiving the highest rating followed by overall safety. Traffic flow and interchanges get somewhat lower ratings from users.

SAFTETY ISSUES

Less than half of respondents feel safety has definitely or probably improved on the 2100 South Freeway over the past few years. One of four respondents feel the road's safety is probably worse or definitely worse and another quarter of respondents say the freeway has remained the same in regards to safety.

When asked what safety concerns they have about the 2100 South Freeway, one quarter of respondents say they either have no concerns or that they don't know of a safety concern. The most frequently mentioned concern is too much congestion and that the road has bad exits and entrances. Other responses include: speeding, merging issues, small road, and aggressive drivers.

Of users who feel SR-201 has gotten worse over the past few years, one in four would like the road widened. The next most frequent response is that there should be more patrolling by law enforcement. A variety of interchange improvements are mentioned including: redesign interchanges, on and off ramps improvements, better signs, more traffic lights/coordinate lights, and changes in the weave design.

INTERCHANGES

The most frequently used entrance is Bangerter Highway followed by I-215. Other entrances are used but less frequently. A large number of respondents mentioned another miscellaneous entrances. These include a number who say 8000 West, 8400 West, Kennecott, Tooele, and entrances along I-80 (eastside and further west).

One in five respondents say they exit SR-201 using I-215. Just over one-in-ten use the I-15 exit and about the same number say the Redwood Road exit. Other exits along SR-201 are used but at a less frequent rate. Over one-third (35%) mention a miscellaneous exit, including numerous exits along I-80 on the eastside and in the west (including Tooele exits).

The most regularly used interchange is the I-215 interchange followed by the Bangerter Highway interchange.

The Bangerter Highway interchange has the longest average wait time with users waiting an average of 3.2 minutes. Two interchanges have wait times over two and a half minutes, Redwood Road and 5600 West. Slightly shorter average wait times are seen on 7200 West, 3200 West, and I-215 .

Respondents ratings of smooth traffic flow on interchanges show just above average ratings for all interchanges with Bangerter Highway and 5600 West receiving higher ratings. The other SR-201 interchanges rate somewhat lower and the Redwood Road interchange received the lowest rating (still above average).

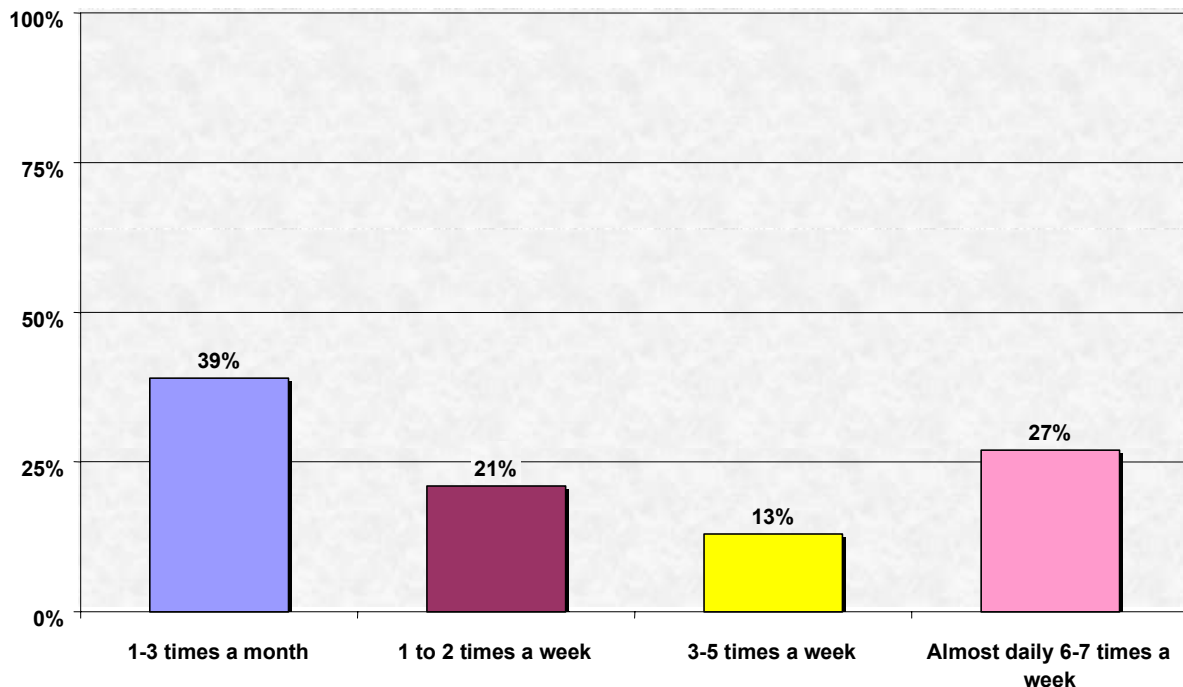
IMPROVEMENTS

Over three-quarters of 2100 South Freeway users say that it is important that improvements are made to the road. Just over one-fifth indicate improvements are not important.

Widen the road/make more lanes is the improvement named most frequently by respondents. Improvements related to I-215 and its interchanges were given by a smaller percent of those responding. One-in-five users named another improvement dealing with interchanges on SR-201.

A majority of 2100 South Freeway users prefer that construction on the road be extended over more years and have less impact on commuters. Nearly one-third favor quicker construction with greater impact on commuters.

Question 1: In an average month, how many times would you say you travel the 2100 South Freeway, also known as SR-201, anywhere from I-15 to 7200 West?

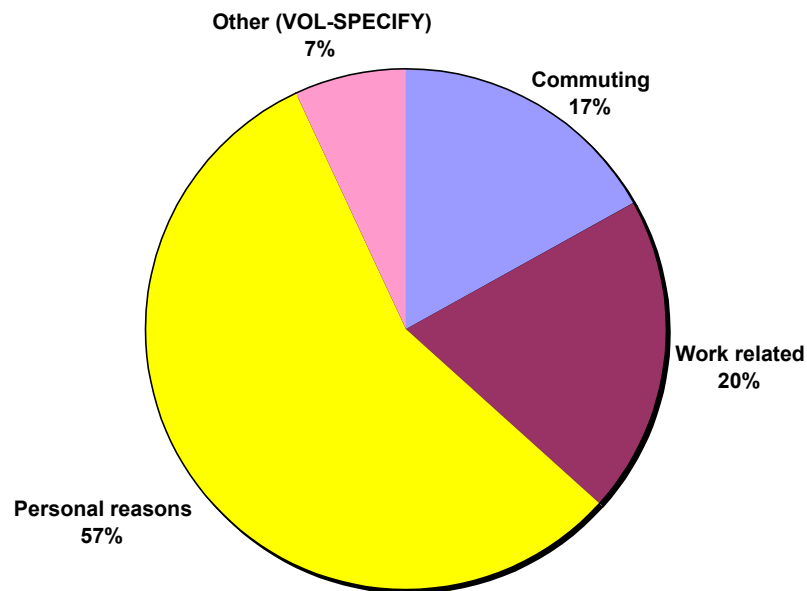


To screen for those eligible, respondents were asked how often they travel the 2100 South Freeway. On surveys where the respondent indicated they travel the road less than once a month, interviewers terminated the survey. Nearly two out of five respondents say they use the road one to three times a month. One-fifth (21%) travel it one to two times a week, and 40% indicate they use the freeway frequently (13% say 3-5 times a week / 27% almost daily).

DEMOGRAPHICS

Respondents from Magna and West Valley are more likely than those from other areas, to use the 2100 South Freeway 6-7 times a week, while respondents from the southwest end of Salt Lake County are less likely to use the road on a regular basis.

Question 2: **When you travel the 2100 South Freeway, is it most often for:**
(READ OPTIONS)

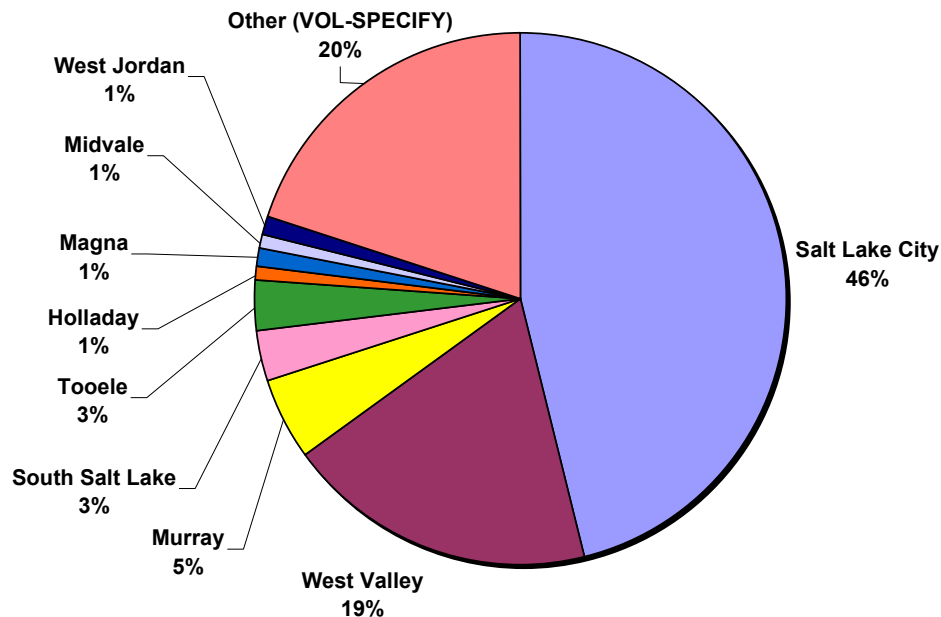


More than half (57%) of users indicate they travel the 2100 South Freeway most often for personal reasons like shopping, or medical appointments, etc. Work related travel (20%) and to get to or from work (17%) are other reasons respondents most often use this freeway.

DEMOGRAPHICS

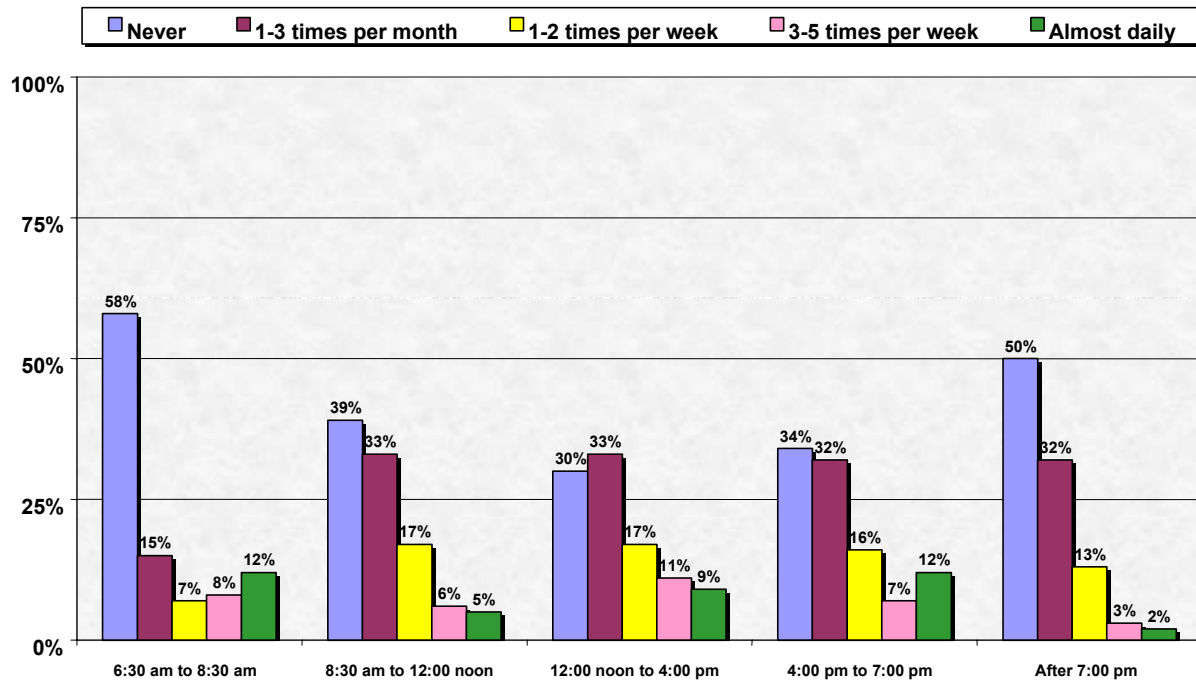
Not surprisingly, those who travel the road more frequently are more likely to be going to and/or from work or using the road for work related purposes. Magna residents are more likely to use the road to get to and from work. Females and older residents are more likely to use the SR-201 for personal reasons.

Question 3: IF FOR WORK: In which city is your work located?
(number responding - 110)



Of the 17% who use the 2100 South Freeway to get to and from work, the largest percent say they work in Salt Lake City (46%). West Valley (19%) is the next most frequently mentioned work location. Several other cities throughout Salt Lake County were mentioned less frequently and a small number indicated their work was located in Tooele County (3%). One in five respondents mentioned another miscellaneous work locations. A list of the other work locations can be found in the verbatim comments in Appendix B.

Questions 4-8: How often do you use the 2100 South Freeway during the following time periods? (weekdays)



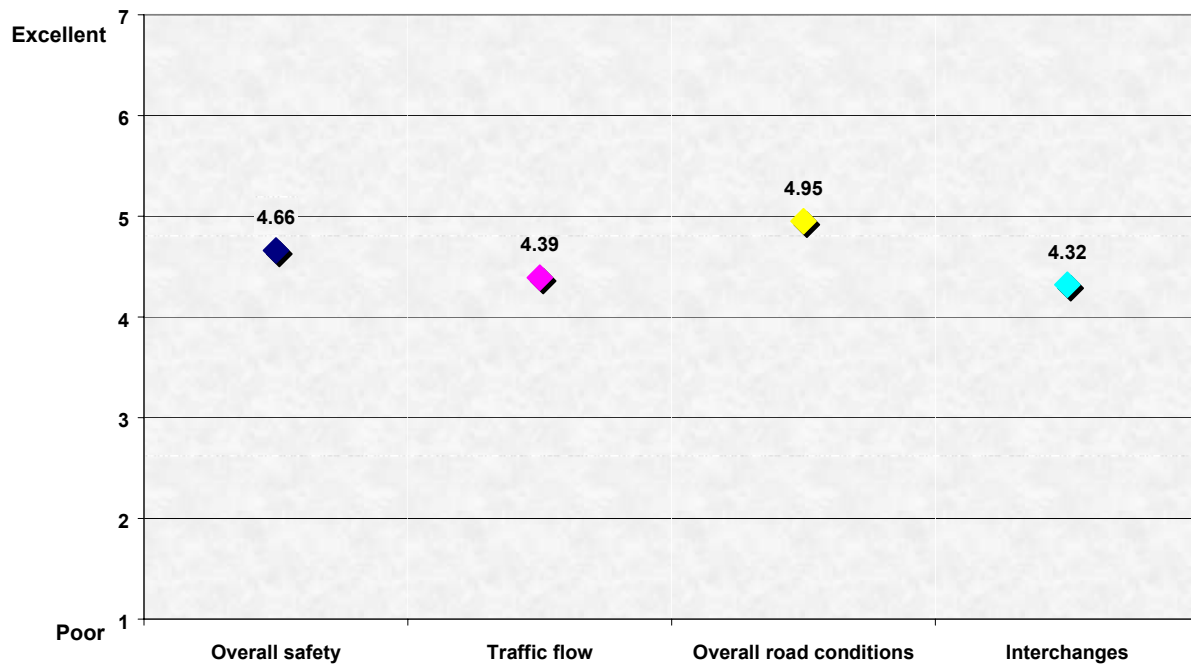
A majority of respondents never use the 2100 South Freeway on weekdays from 6:30 am to 8:30 am (58%) and after 7:00 pm (50%). Around a third of respondents say they never use the freeway during the daytime hours.

The most frequent time for daily users is during the traditional "rush" hours with 12% saying they travel between 6:30 to 8:30 and 4:00 pm to 7:00 pm (12%).

DEMOGRAPHICS

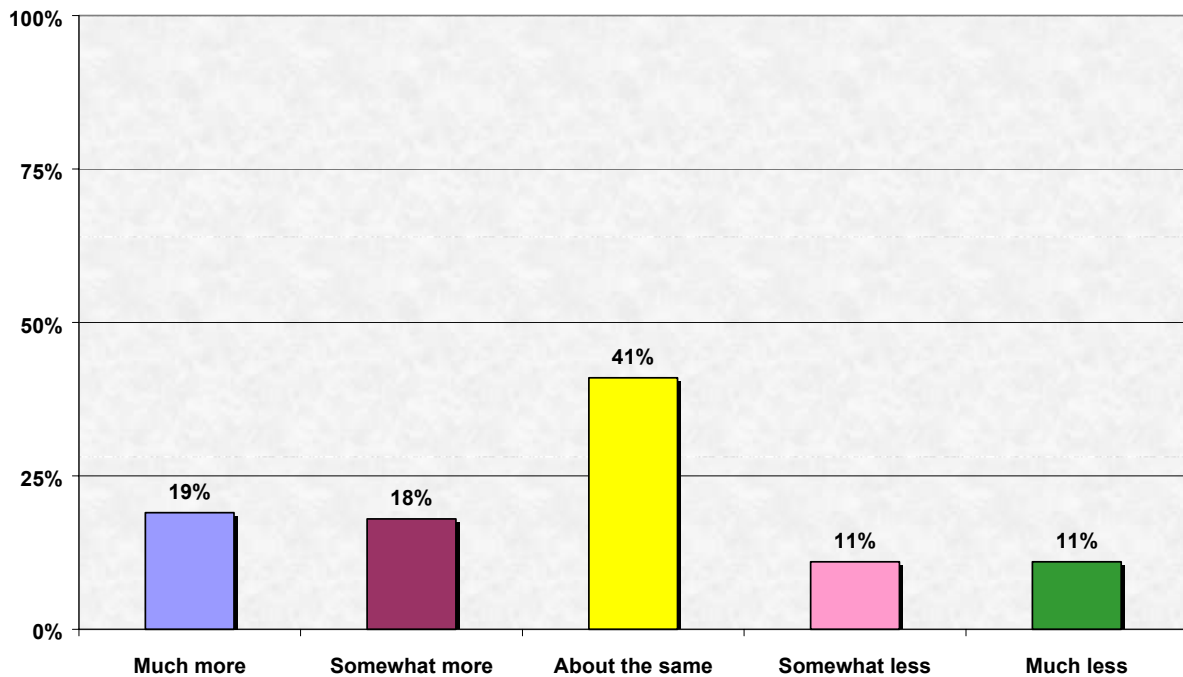
As would be expected, respondents using the road on a regular basis (6-7 times a week) are more likely to travel during every time period.

Questions 9 - 12: How would you rate the 2100 South Freeway on the following using a 1-7 scale, with one meaning VERY POOR and seven meaning EXCELLENT:



When asked to rate the 2100 South Freeway on various items, users give the road only slightly above average ratings. Travelers rated the overall road conditions highest with a mean score of 4.95 followed by overall safety at 4.66. Traffic flow (4.39) and interchanges (4.32) get somewhat lower ratings from users.

Question 13: Would you say you use the 2100 South Freeway more often or less often than you did a year ago?

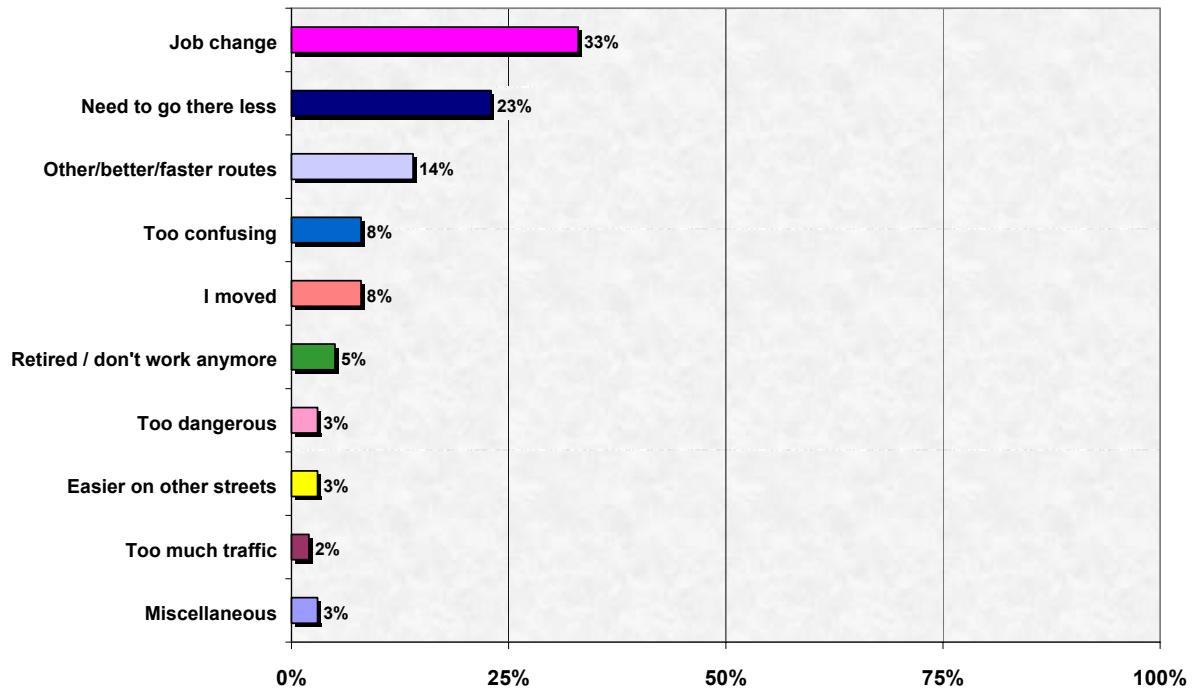


Two in five users (41%) indicate they are currently using the 2100 South Freeway about the same amount as they did one year ago. Another 37% are using the road much more (19%) or somewhat more (18%) compared to a year ago. Just over one-fifth (22%) say they use SR-201 either somewhat or much less now than in the previous year.

DEMOGRAPHICS

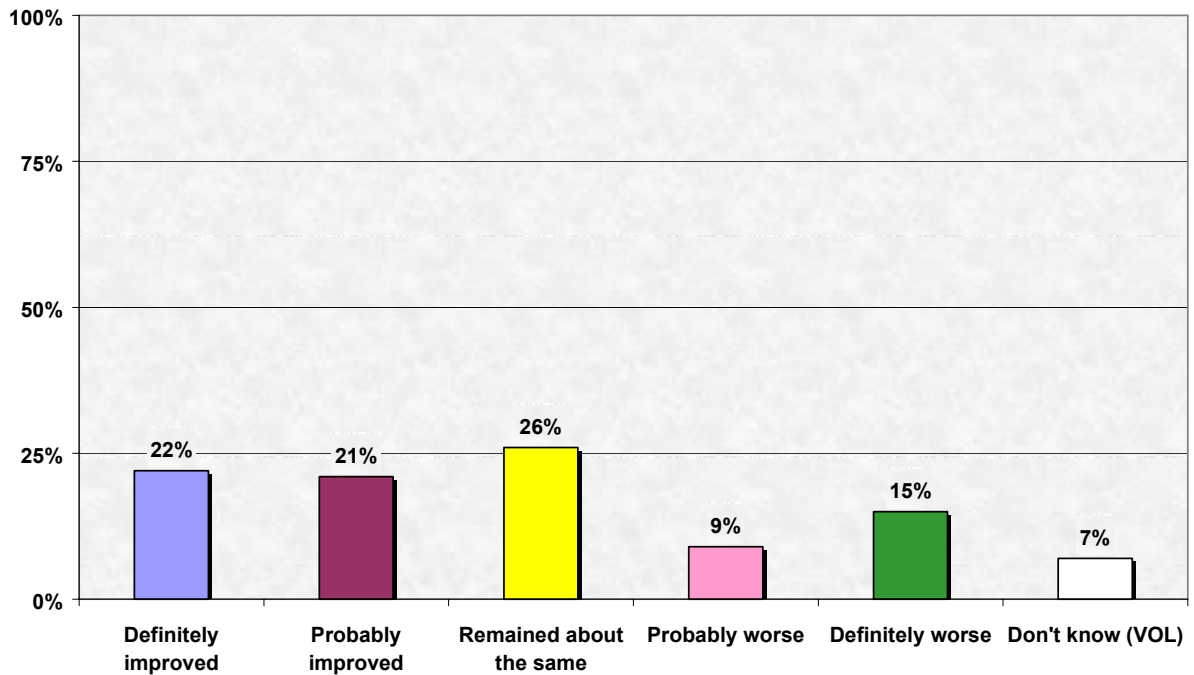
Those who currently use 2100 South Freeway 1-3 times a month are more likely to say they travel it less often than they did a year ago. Daily users and younger respondents are more likely to say they are using the road much more often than a year ago.

Questions 14: IF LESS OFTEN: Why do you use it less often?
(number responding - 66)



The most common reasons given by respondents for using the 2100 South Freeway less frequently include: change in employment (33%), have no need to travel out there (23%), and using other routes (14%). Other less frequently mentioned reasons include: moved, confusing road, don't work any more, difficult to use, and that the road is dangerous. Actual verbatim comments for this question are in Appendix B.

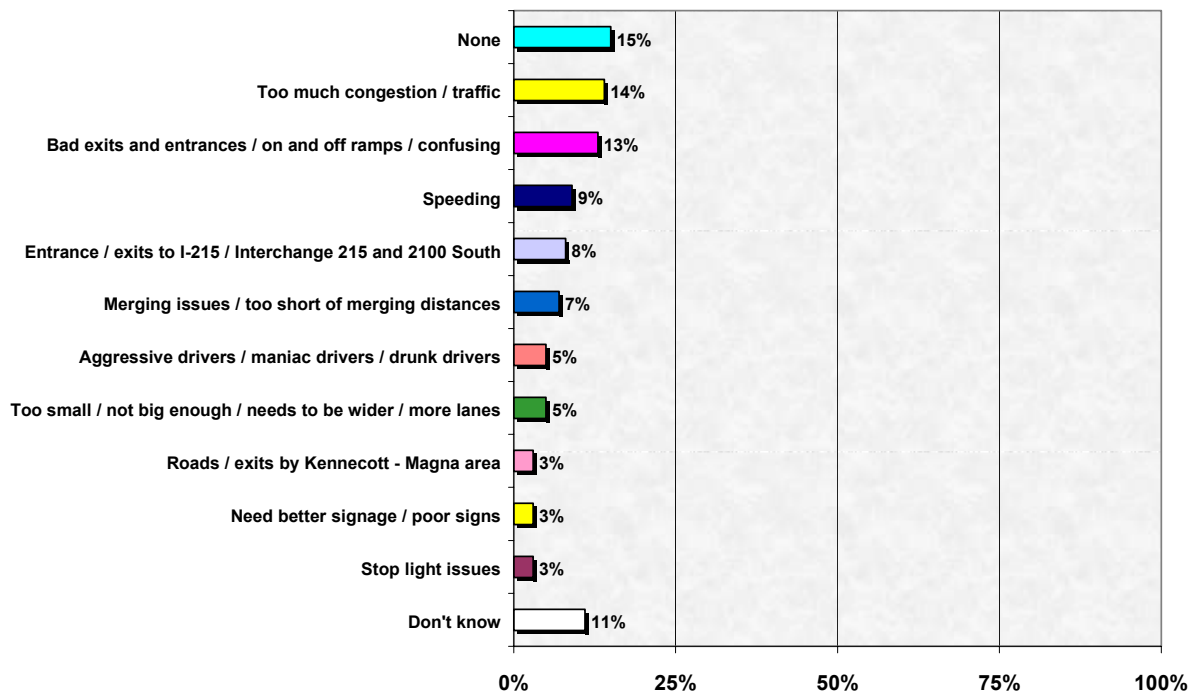
Question 15: **In your opinion, has safety along the 2100 South Freeway improved or gotten worse over the past few years?**



Of the 43% who feel safety has improved on the 2100 South Freeway over the past few years, users are divided between those saying it has definitely improved (22%) and those who say it has probably improved (21%). One-fourth feel the road's safety is probably worse (9%) or definitely worse (15%). Another quarter of respondents (26%) say the freeway has remained the same in regards to safety.

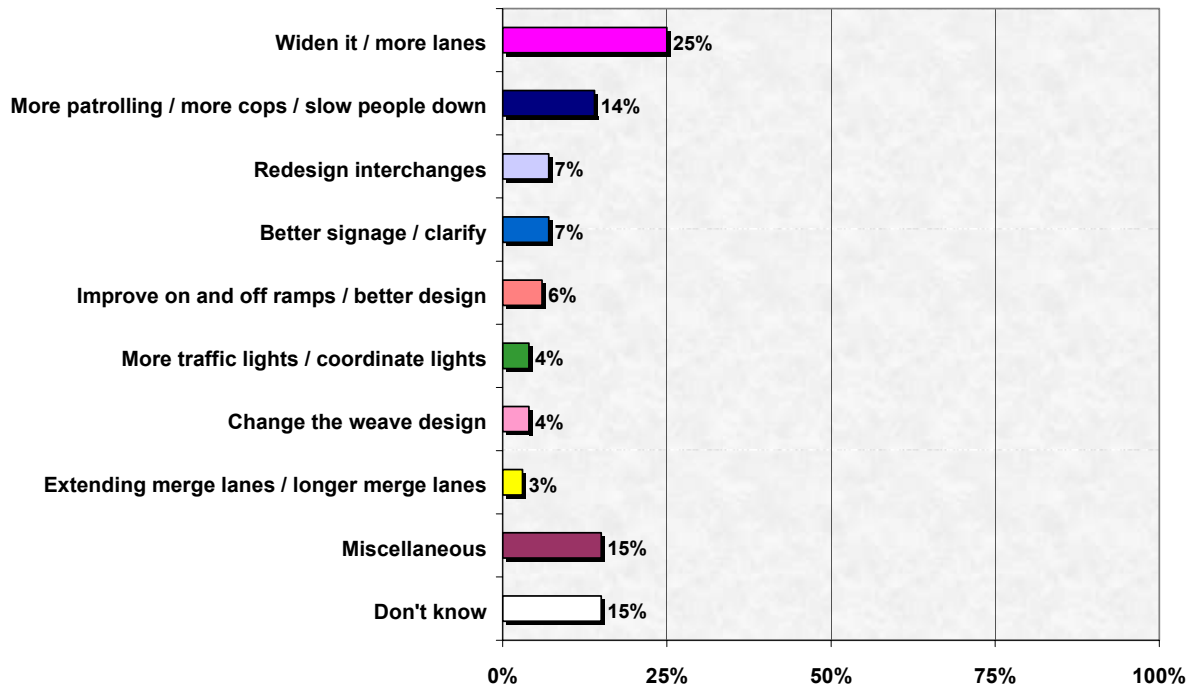
Question 16: What safety concerns, if any, do you have about the 2100 South Freeway?

(Top responses only)

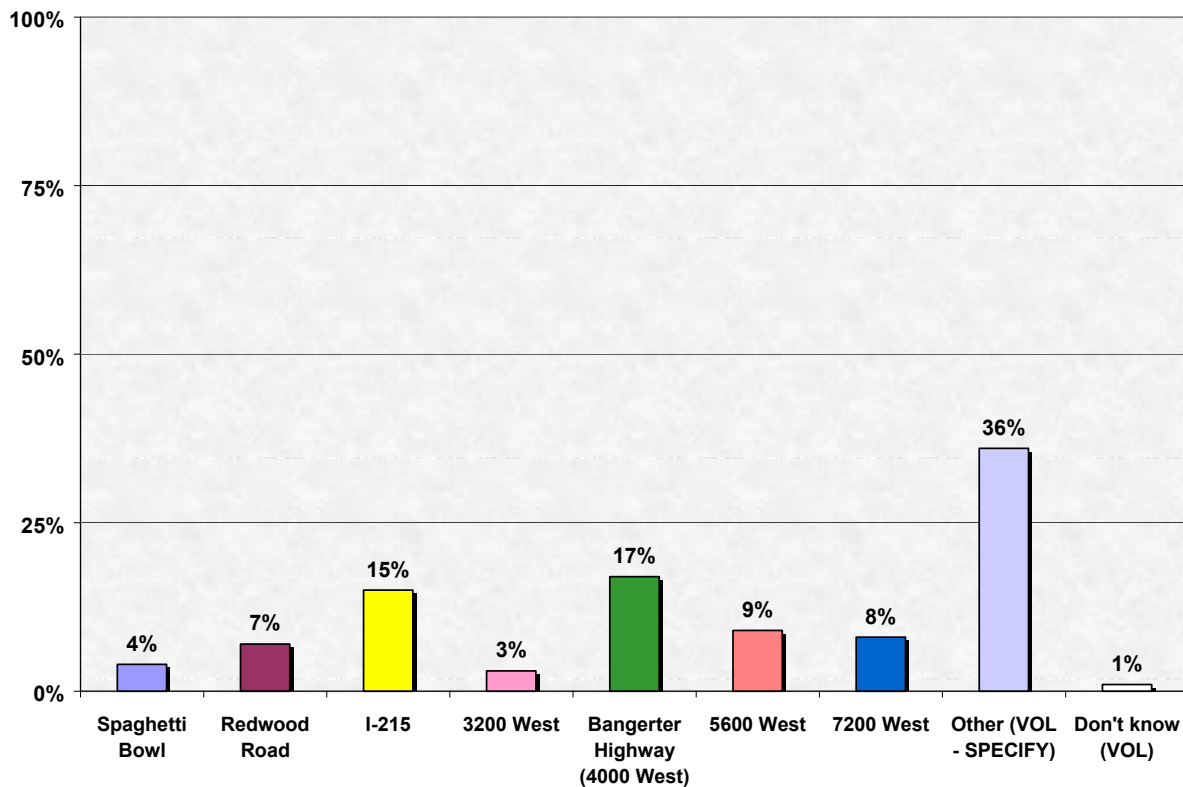


When asked what safety concerns they have about the 2100 South Freeway, one-in-four respondents say they either have no concerns (15%) or that they don't know of a safety concern (11%). The most frequently mentioned concern is too much congestion (14%) and that the road has bad exits and entrances (13%). Other responses include: speeding (9%), merging issues (7%), small road (5%), and aggressive drivers (5%). A number of other responses are given less frequently. Verbatim comments regarding safety concerns are included in Appendix B.

Question 17: IF WORSE: What do you feel could be done to improve safety?
(number responding - 72)

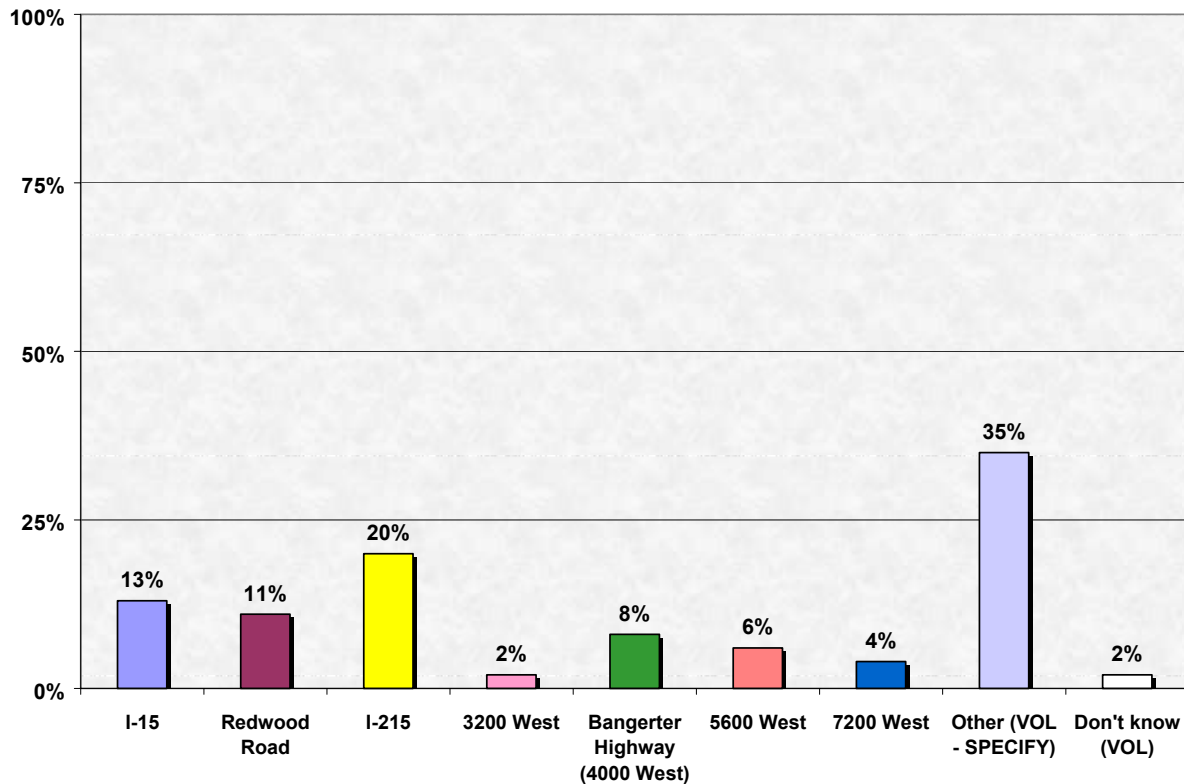


When asked for ideas to improve safety on the freeway, one quarter of respondents (25%) who say the road is worse, would like the road widened, and 14% feel there should be more patrolling by law enforcement. Interchange issues are mentioned often with 7% saying they should be redesigned, or that the on and off ramps should be improved (6%). Better signs were suggested by 7%, more traffic lights/coordinate lights by 4%, and changes in the weave design by 4% of those who feel the road is worse. A number of other improvements were given less frequently. Verbatim comments for this question are in Appendix B.

Question18: Where do you generally enter the 2100 South Freeway?

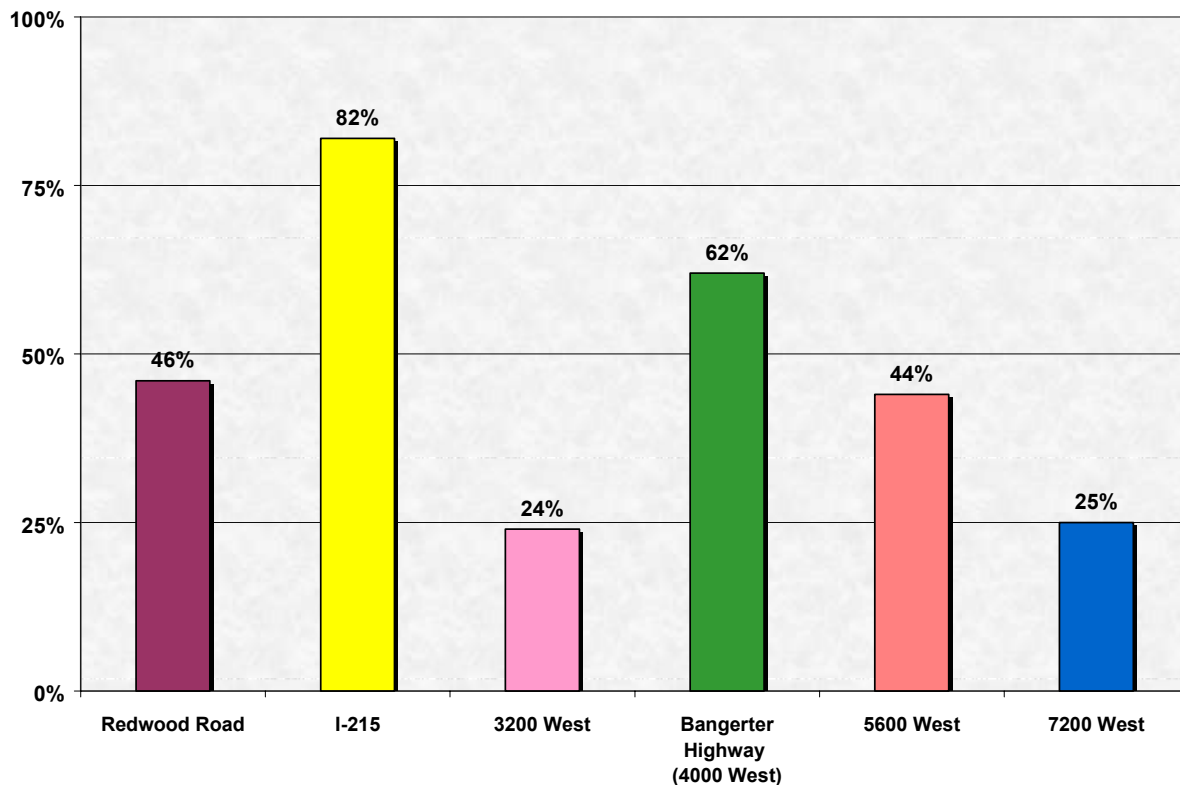
Respondents enter the 2100 South Freeway from a number of locations, the most common being Bangerter Highway (17%) and I-215 (15%). Redwood Road (7%), 5600 West (9%), and 7200 West (8%) are used less often. A large number of respondents mentioned another miscellaneous entrance. These miscellaneous responses include a number who say 8000 West, 8400 West, Kennecott, Tooele, and entrances along I-80 (eastside and further west).

Question 19: And, when you use the 2100 South Freeway, where do you generally exit?



When asked where they generally exit SR-201, one in five respondents say I-215 (20%). Just over one-in-ten use the I-15 (13%) or Redwood Road (11%) exits. Fewer use exits at Bangerter Highway (8%), 5600 West (6%), 7200 West (4%) and 3200 West (2%). Over one-third (35%) mention a miscellaneous exit, including numerous exits along I-80 on the eastside and in the west (including Tooele exits). These miscellaneous comments are in Appendix B.

Questions 20-25: Which of the following interchanges do you use on a regular basis?

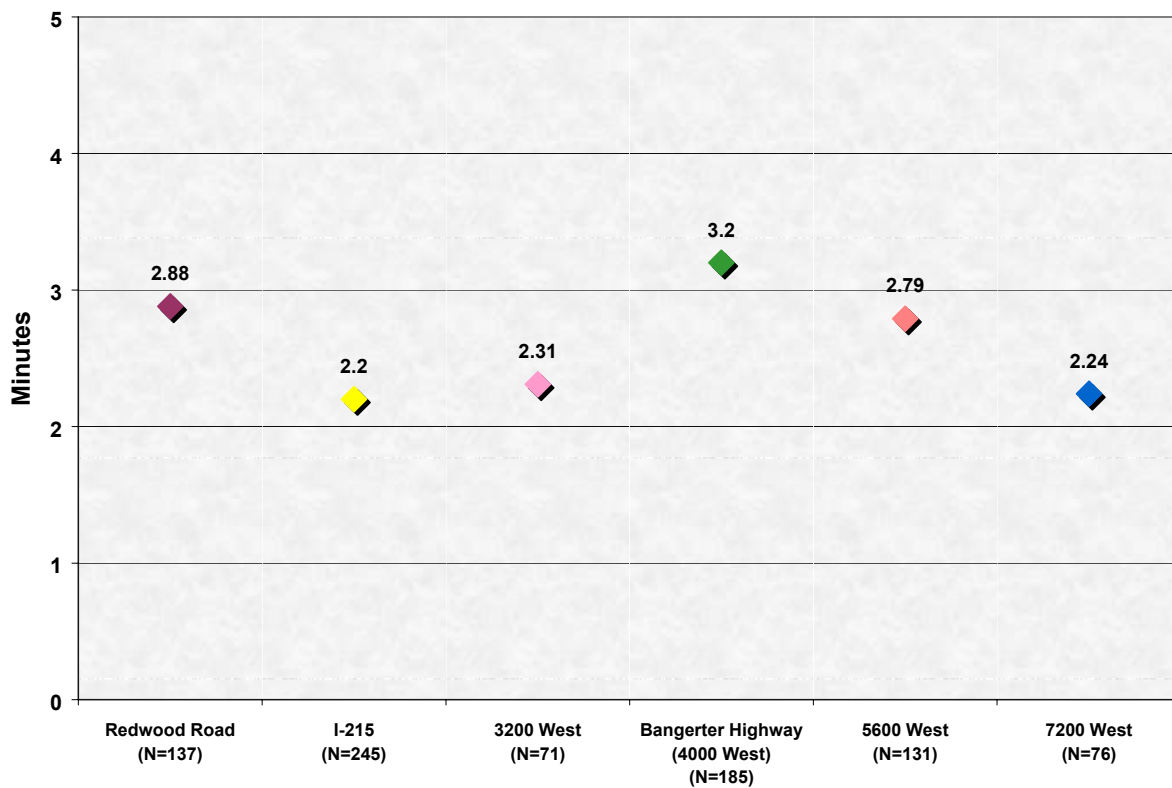


The I-215 interchange is used most regularly by respondents (82%) followed by the Bangerter Highway interchange (62%). Redwood Road and 5600 West are used regularly by 46% and 44% of SR-201 travelers, respectively. The 3200 West interchange is used regularly by about a quarter of respondents (24%), as is the 7200 West interchange (25%).

DEMOGRAPHICS

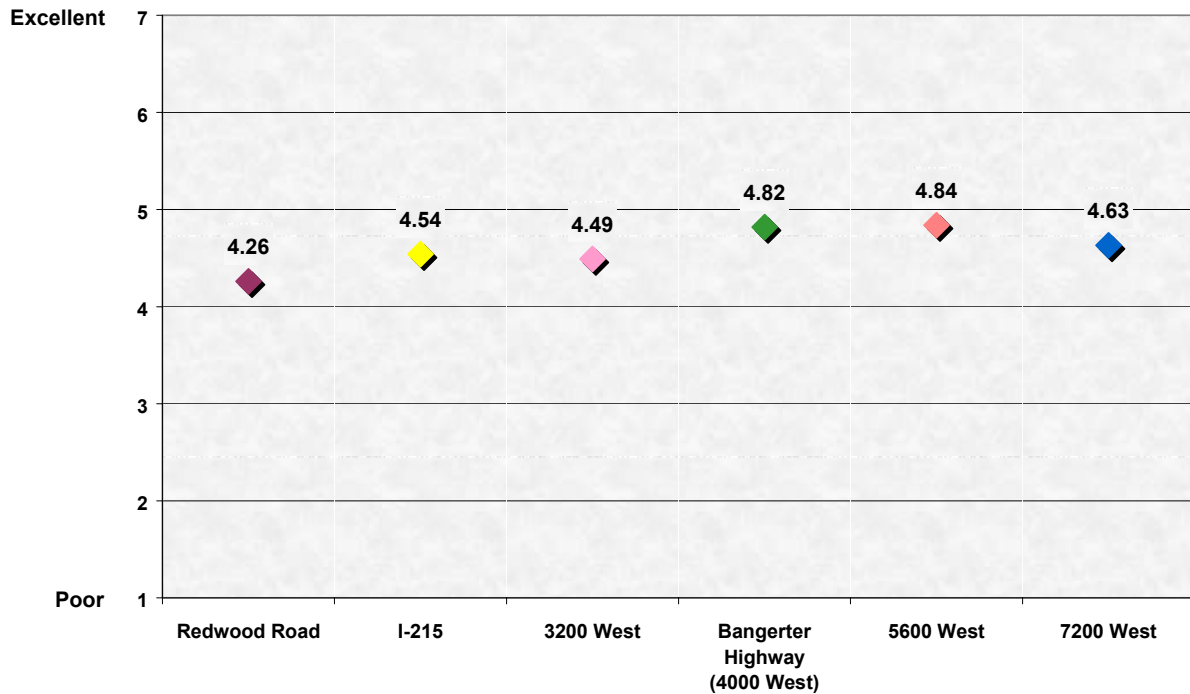
Daily travelers on the 2100 South Freeway are more likely to use the I-215 and 7200 West interchanges. Respondents that use the road 3-5 times a week are more likely than other users to say they use the 5600 West interchange. Magna residents use the 7200 West interchange more than those from other areas.

Questions 26-31: IF USE: On average how long do you have to wait to enter or exit the 2100 South Freeway at this interchange?



The Bangerter Highway interchange has the longest average wait time with users waiting an average of 3.2 minutes. Two interchanges have wait times over two and a half minutes, Redwood Road (2.88) and 5600 West (2.79). Slightly shorter average wait times are seen on 7200 West (2.24 minutes), 3200 West (2.31), and I-215 (2.20).

Questions 32-37: How would you rate each of the interchanges on its ability to allow smooth traffic flow along the 2100 South Freeway? Please use a 1-7 scale, with one meaning the interchange is VERY POOR and seven meaning the interchange is EXCELLENT.

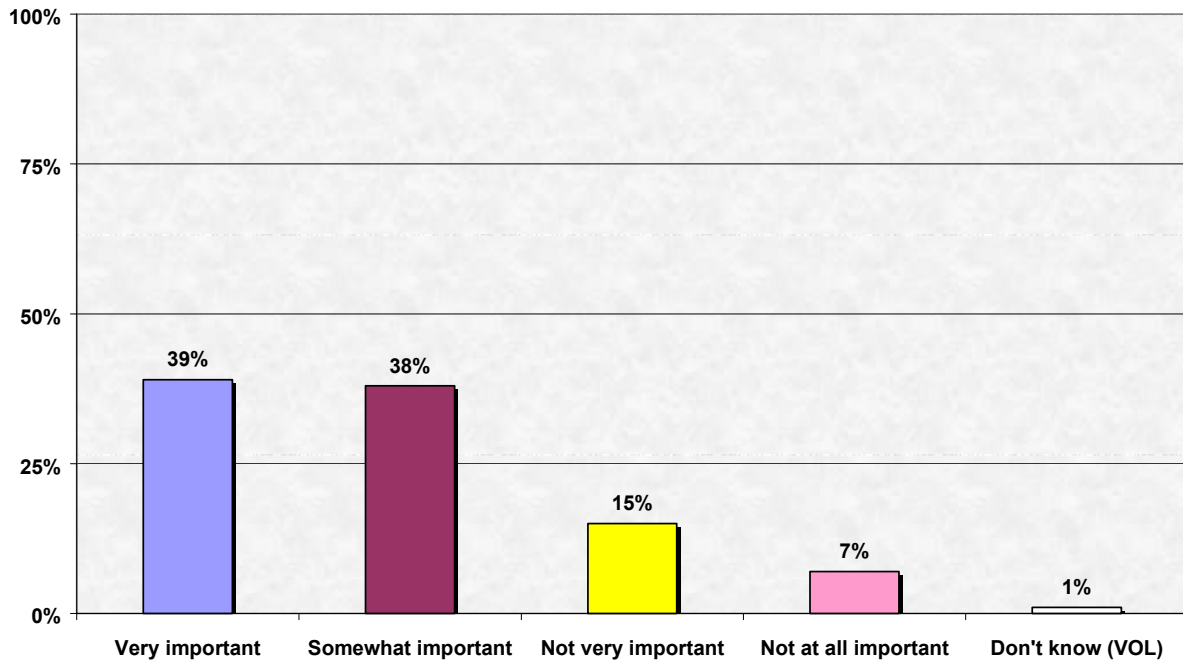


Respondents ratings of interchanges show just above average ratings for all interchanges with Bangerter Highway (4.84) and 5600 West (4.84) receiving higher ratings. The other SR-201 interchanges rate somewhat lower but still above 4.0 on the 1-7 scale. The Redwood Road interchange received the lowest rating at 4.26.

DEMOGRAPHICS

Older respondents and those residing in Salt Lake City are more likely to give higher ratings to the Redwood Road interchange than other subgroups. Those more likely to give higher ratings on 7200 South are from Magna and Salt Lake City.

**Question 38: How important is it to you that improvements are made to the
2100 South Freeway?**

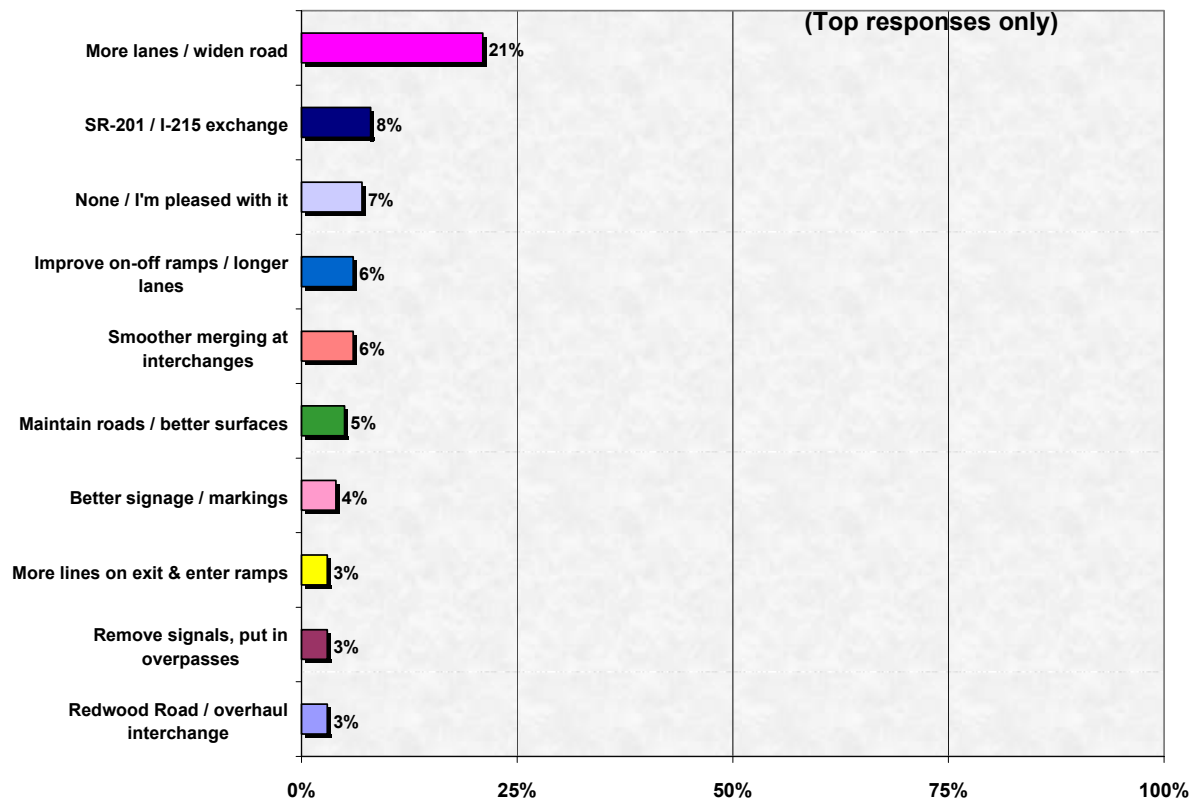


The majority of 2100 South Freeway users say that it is important (39% very / 38% somewhat) that improvements are made to the road. Just over one-fifth indicate improvements are not important, with 15% saying not very and 7% saying not at all important.

DEMOGRAPHICS

Respondents who travel the freeway more often (several times a week) are more likely to say improvements are important. Users who reside in West Valley are also more likely to say improvements are important. Those who travel the 2100 South Freeway 1-3 times a week are less likely to find improvement to the road important.

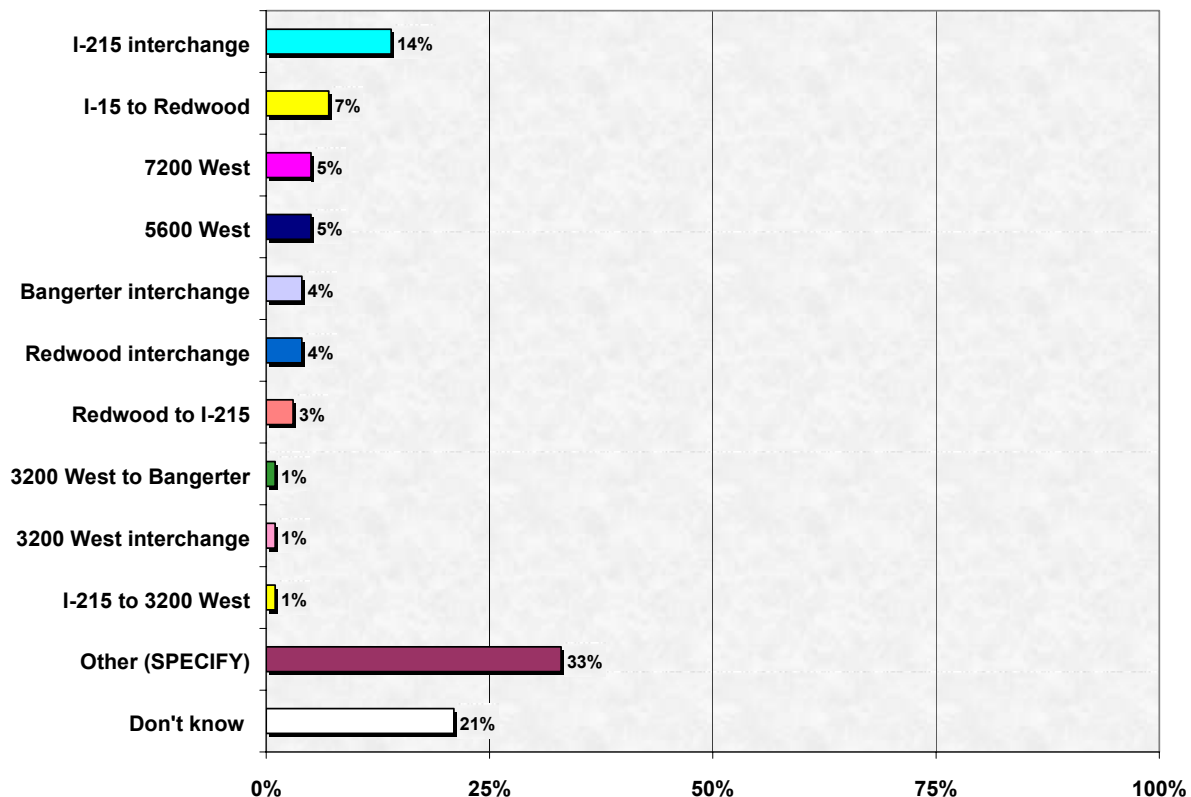
Question 39: Thinking about improvements, what would you like to see done?



Widen the road/make more lanes is the improvement named most frequently by respondents (21%). Improvements related to I-215 and its interchanges were given by 8% of those responding. One-in-five users named an other improvement dealing with interchanges on SR-201 including: better merging systems (6%), improve on-off ramps (6%), more line on exit and enter ramps (3%), better interchange at Redwood Road (3%), Bangerter (2%), and making the interchanges less confusing (2%).

Other improvements respondents would like to see include: better maintenance (5%), better signs (4%), adding overpasses (3%), better striping (2%), controlling aggressive drivers (2%) and speeders (1%).

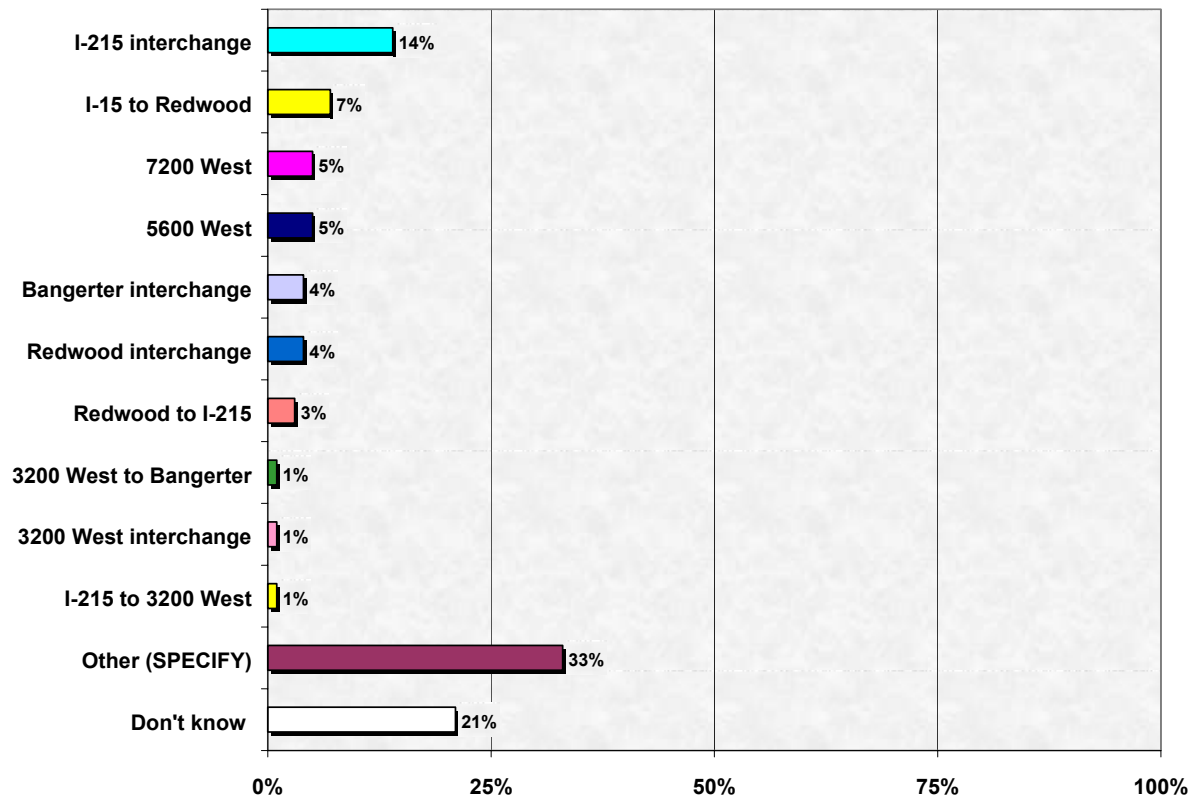
Question 40: Where should the improvements begin - that is - what section or area should be started first? (UNAIDED)



When asked unaided where improvements should begin, 14% of 2100 South Freeway travelers say the I-215 area. Respondents who say improvements should start in the area of I-15 to Redwood Road number 7%, and the 5600 West and 7200 West areas were mentioned by 5%, respectively.

Though many name a specific area where improvements should be started along SR-201, the largest number (33%) mention a miscellaneous response. These miscellaneous responses include: respondents who mention several locations, locations west of 7200 West, and the entire SR-201. All miscellaneous comments for this question are included in Appendix B of this report.

Question 41. Thinking about the possibility of construction on the 2100 South Freeway, which of the following scenarios do you most prefer...?

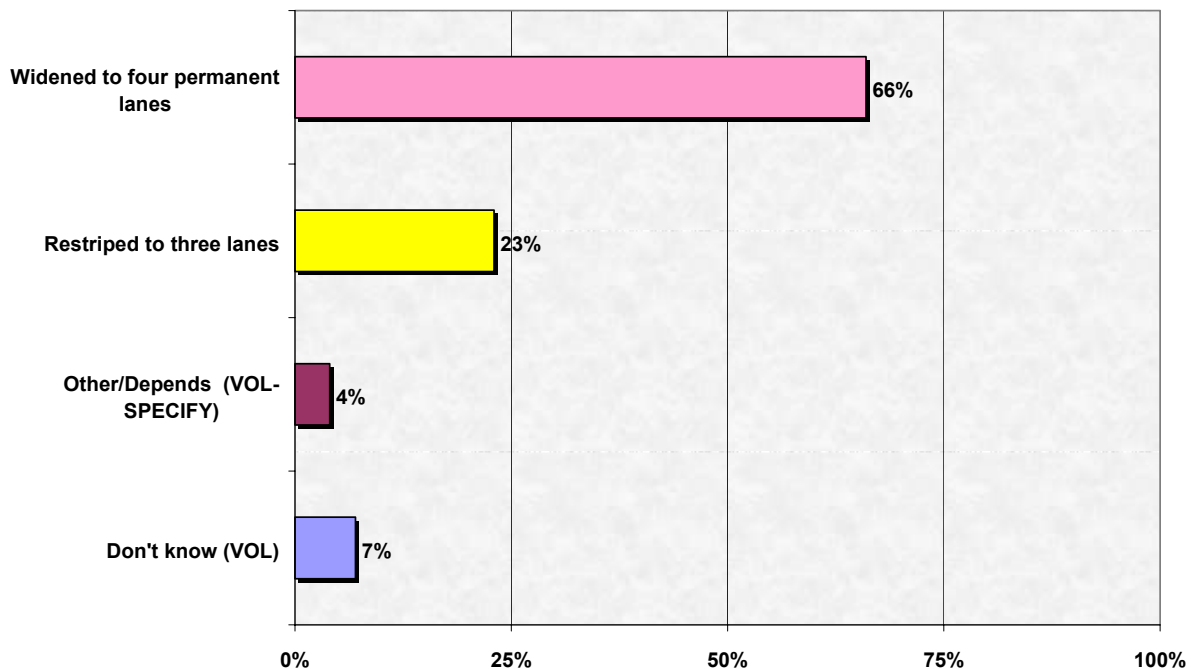


A majority of 2100 South Freeway users (62%) prefer that construction on the road be extended over more years and have less impact on commuters. Nearly one-third (31%) favor quicker construction with greater impact on commuters.

DEMOGRAPHICS

Respondents who travel SR-201 fewer times (1-3 times a month) are more likely to prefer a greater impact.

Question 42:. As you may know I-215 was restriped for the I-15 reconstruction to four (4) lanes. This restriping is temporary and does not meet federal standards. In your opinion, should the freeway be widened to accommodate four (4) permanent lanes or should the road be restriped back to three (3) lanes from the 2100 South Freeway to I-80 West?



Two-thirds of respondents favor permanent widening of the lanes on the 2100 South Freeway to I-80 West. Just under one-fourth (23%) feel that restriping back to three lanes is appropriate. A few respondents give other responses (4%) which generally say the road should be left how it is.

DEMOGRAPHICS

Younger respondents (below 35 years) are more likely to favor widening the 2100 South Freeway.